

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1-15. (canceled)
16. (previously presented) The method of claim 109 wherein said diene plant produces a compound selected from the group consisting of 1,3-butadiene and isoprene.
17. (previously presented) The method of claim 109 further comprising separating solvent from said blend.
18. (previously presented) The method of claim 16 further comprising separating solvent from said blend.
19. (previously presented) The method of claim 109 wherein said N,N-disubstituted amide is an N,N-dialkyl amide comprising alkyl groups having from about 16 to about 22 carbon atoms.
20. (original) The method of claim 16 wherein said N,N-disubstituted amide is an N,N-alkyl amide comprising alkyl groups having from about 16 to about 22 carbon atoms.
21. (original) The method of claim 17 wherein said N,N-disubstituted amide is an N,N-dialkyl amide comprising alkyl groups having from about 16 to about 22 carbon atoms.
22. (original) The method of claim 18 wherein said N,N-disubstituted amide is an N,N-dialkyl amide comprising alkyl groups having from about 16 to about 22 carbon atoms.
23. (previously presented) The method of claim 109 wherein said N,N-disubstituted amide is amide of tall oil fatty acid.
24. (previously presented) The method of claim 16 wherein said N,N-disubstituted amide is amide of fatty acid.

25. (previously presented) The method of claim 17 wherein said N,N-disubstituted amide is amide of fatty acid.

26. (previously presented) The method of claim 18 wherein said N,N-disubstituted amide is amide of fatty acid.

27. (previously presented) The method of claim 19 wherein said N,N-disubstituted amide is amide of fatty acid.

28. (previously presented) The method of claim 20 wherein said N,N-disubstituted amide is amide of fatty acid.

29. (canceled)

30. (previously presented) The method of claim 110:

provided that,

when R¹ and R² are connected to form a cyclic amide, and said cyclic amide comprises a

nitrogen heteroatom, R¹ and R² each contain 2 carbon atoms and said nitrogen

heteroatom comprises a substituent selected from the group consisting of

hydrogen, a hydroxyalkyl group having from about 1 to about 3 carbon atoms, and

an alkyl group having from about 1 to about 6 carbon atoms; and,

provided that when R¹ is selected from the group consisting of a hydrogen atom and

alkenyl group, R² is



wherein, when n is an even number, R¹ or R² has a quantity of carbon-carbon double

bonds and said quantity increases from 1 to 2 to 3, to 4 to a maximum of n/2, with

z following a first progression 1, 3, 5, 7,.... to $n - 1$, depending of the number of alkene groups present; and

when n is an odd number and said quantity increases from 1 to 2 to 3, to 4 to a maximum of $(n-1)/2$, with z following a second progression, 1, 3, 5, 7,.... to $n-2$.

31. (previously presented) The method of claim 110 wherein R^3 is selected from the group consisting of branched and unbranched alkyl and alkenyl groups having from about 16 to 22 carbon atoms.

32. (original) The method of claim 30 wherein R^3 is selected from the group consisting of branched and unbranched alkyl and alkenyl groups having from about 16 to 22 carbon atoms.

33-34. (canceled)

35. (previously presented) The method of claim 112 further comprising separating said solvent from said blend.

36. (original) The method of claim 35 wherein said solvent is an extractive distillation solvent.

37. (original) The method of claim 36 wherein said solvent comprises acetonitrile.

38. (currently amended) A method for preventing fouling of equipment during solvent recovery in a diene plant comprising treating a solvent recovery blend comprising solvent and at least one fouling agent with N,N-dialkyl amide of fatty acid in an amount of about 20 ppm or more.

39. (original) The method of claim 38 wherein said amount is about 50 ppm or more.

40. (original) The method of claim 38 further comprising separating said solvent

from said blend.

41. (previously presented) A method for inhibiting fouling of equipment during solvent recovery in a diene plant comprising treating a solvent recovery blend comprising solvent and at least one fouling agent with an N,N-dialkyl amide of tall oil fatty acid in an amount of about 20 ppm or more.

42. (original) The method of claim 41 wherein said amount is about 50 ppm or more.

43. (previously presented) A method for inhibiting fouling of equipment during solvent recovery in a diene plant comprising treating a solvent recovery blend comprising solvent and at least one fouling agent with N,N-dimethyl amide of fatty acid in an amount of about 20 ppm or more.

44. (original) The method of claim 43 wherein said amount is about 50 ppm or more.

45. (previously presented) The method of claim 43 wherein said fatty acid is tall oil fatty acid.

46. (previously presented) The method of claim 44 wherein said fatty acid is tall oil fatty acid.

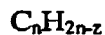
47-67. (canceled)

68. (previously presented) The method of claim 113:

provided that,

when R^1 is selected from the group consisting of a hydrogen atom and alkenyl group, R^2

is



wherein, when n is an even number, R^1 or R^2 has a quantity of carbon-carbon double bonds and said quantity increases from 1 to 2 to 3, to 4 to a maximum of $n/2$, with z following a first progression 1, 3, 5, 7,.... to $n - 1$, depending of the number of alkene groups present; and

when n is an odd number and said quantity increases from 1 to 2 to 3, to 4 to a maximum of $(n-1)/2$, with z following a second progression, 1, 3, 5, 7,.... to $n-2$.

69. (previously presented) The method of claim 113 wherein R^3 is selected from the group consisting of branched and unbranched alkyl and alkenyl groups having from about 16 to 22 carbon atoms.

70. (original) The method of claim 68 wherein R^3 is selected from the group consisting of branched and unbranched alkyl and alkenyl groups having from about 16 to 22 carbon atoms.

71. (previously presented) The method of claim 113 wherein R^1 and R^2 independently are selected from the group consisting of hydrogen atoms; hydroxyalkyl groups having from about 1 to about 3 carbon atoms; branched or unbranched alkyl groups and alkenyl groups having from about 1 to about 6 carbon atoms.

72. (previously presented) The method of claim 113 wherein R^1 and R^2 independently are selected from the group consisting of alkyl groups having from about 1 to about 4 carbon atoms.

73. (original) The method of claim 68 wherein R^1 and R^2 independently are selected from the group consisting of hydrogen atoms; hydroxyalkyl groups having from about 1 to about 3 carbon atoms; branched or unbranched alkyl groups and alkenyl groups having from about 1 to

about 6 carbon atoms.

74. (original) The method of claim 68 wherein R^1 and R^2 independently are selected from the group consisting of alkyl groups having from about 1 to about 4 carbon atoms.

75. (original) The method of claim 69 wherein R^1 and R^2 independently are selected from the group consisting of hydrogen atoms; hydroxyalkyl groups having from about 1 to about 3 carbon atoms; branched or unbranched alkyl groups and alkenyl groups having from about 1 to about 6 carbon atoms.

76. (original) The method of claim 69 wherein R^1 and R^2 independently are selected from the group consisting of alkyl groups having from about 1 to about 4 carbon atoms.

77. (original) The method of claim 70 wherein R^1 and R^2 independently are selected from the group consisting of hydrogen atoms; hydroxyalkyl groups having from about 1 to about 3 carbon atoms; branched or unbranched alkyl groups and alkenyl groups having from about 1 to about 6 carbon atoms.

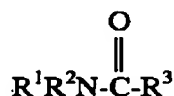
78. (original) The method of claim 70 wherein R^1 and R^2 independently are selected from the group consisting of alkyl groups having from about 1 to about 4 carbon atoms.

79-108. (canceled).

109. (previously presented) A method for inhibiting fouling of equipment during solvent recovery in a diene plant comprising treating a solvent recovery blend comprising at least one fouling agent with N,N-disubstituted amide in an amount and under conditions effective to inhibit said fouling.

110. (currently amended) A method for inhibiting fouling of equipment during solvent recovery in a diene plant comprising:

treating a solvent recovery blend comprising at least one fouling agent with ~~N,N-~~
~~disubstituted amide~~ dispersant in an amount and under conditions effective to
inhibit said fouling, ~~wherein and,~~
providing as said dispersant said N,N-disubstituted amide ~~hashaving~~ the following
general formula:



wherein:

R¹ and R² independently are selected from the group consisting of hydrogen atoms;

hydroxyalkyl groups having from about 1 to about 3 carbon atoms; aryl groups,
aralkyl groups, alkaryl groups, branched or unbranched alkyl groups and alkenyl
groups having from about 1 to about 30 carbon atoms; cyclic groups having a total
number of from about 4 to about 6 carbon atoms; and, cyclic groups wherein R¹
and R² are connected either directly or via a heteroatom to form a cyclic group
having a total number of members of from about 5 to about 7, wherein said
heteroatom is selected from the group consisting of nitrogen, oxygen, and sulfur;

R³ is selected from the group consisting of hydrogen, aryl groups, alkaryl groups, aralkyl
groups, and branched or unbranched alkyl and alkenyl groups having from about 1
to 30 carbon atoms.

111. (currently amended) A method for inhibiting fouling of equipment during solvent
recovery in a diene plant comprising:

-treating a solvent recovery blend comprising at least one fouling agent with ~~N,N-~~

~~disubstituted amide dispersant~~ in an amount and under conditions effective to inhibit said fouling; and,
 providing as said dispersant ~~wherein said N,N-disubstituted amide has~~having the following general formula:



wherein:

R¹ and R² are selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl and butyl groups; and

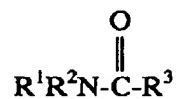
R³ is selected from the group consisting of alkyl groups, alkenyl groups, and combinations thereof having from about 16 to about 22 carbon atoms.

112. (previously presented) A method for inhibiting fouling of equipment during solvent recovery in a diene plant comprising treating a solvent recovery blend comprising solvent and at least one fouling agent with N,N-dimethyl amide of fatty acid in an amount and under conditions effective to inhibit said fouling.

113. (currently amended) A method for inhibiting fouling of equipment during solvent recovery in a diene plant comprising:

-treating a solvent recovery blend comprising at least one fouling agent with N,N-
~~disubstituted amide dispersant~~ in an amount and under conditions effective to inhibit said fouling; and,

~~wherein providing as said dispersant~~ N,N-disubstituted amide ~~has~~having the following general formula:



wherein:

R^1 and R^2 independently are selected from the group consisting of hydrogen atoms;

hydroxyalkyl groups having from about 1 to about 3 carbon atoms; branched or unbranched alkyl groups and alkenyl groups having from about 1 to about 30 carbon atoms; and

R^3 is selected from the group consisting of hydrogen, aryl groups, aralkyl groups, alkaryl groups, and branched or unbranched alkyl groups and alkenyl groups having from about 1 to 30 carbon atoms.

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